

REMARKS

Claims 1 to 23 are pending in this application. Of these, claims 1, 12, 18, and 21 are independent. Favorable reconsideration and further examination are respectfully requested.

Initially, claim 23 was rejected under the second paragraph of 35 U.S.C. § 112 as being indefinite. In particular, the word "broad" was objected to. As suggested by the Examiner, Applicants have deleted the word "broad" from claim 23. Withdrawal of the § 112 rejection is therefore respectfully requested.

Turning to the art rejection, claims 1 to 4, 6 to 10, and 12 to 23 were rejected under 35 U.S.C. 102(e) over Gorsuch et al (U.S. Pat. 6081536). Claims 5 and 11 were rejected under 35 U.S.C. 103 over Gorsuch in view of Whitehead (U.S. Pat. 5732077). As shown above, Applicants have amended the claims to define the invention with greater clarity. In view of these clarifications, reconsideration and withdrawal of the art rejections are respectfully requested.

Each of claims 1, 12, 18, and 21 has been amended to specify that *blocks of data* are entered in the frame in accordance with a predetermined coding, and that the data is transmitted in *blocks* in the frame. Furthermore, each of claims 1, 12, 18, and 21 recite a *service-specific* block size as a smallest transmission unit of data from each of plural services. Gorsuch is not believed to disclose or to suggest these features of the independent claims, particularly with respect to using a service-specific block size as a smallest transmission unit of data and entering blocks of data in a frame in accordance with a predetermined coding.

In this regard, Applicants take this opportunity to address some general points concerning the difference between the "blocks" in Applicants' claims and the "subchannels" in Gorsuch.

While the Examiner regards the terms "blocks" and "subchannels" to be equivalent (see page 3 of Office Action), Applicants contend that the subchannels in Gorsuch cannot be regarded as blocks. A skilled person would understand that a block can be a transmission unit of data to be transmitted, where the data has a certain number of bits. A subchannel in Gorsuch, by contrast, is a frequency band through which encoded data is transmitted. In column 6 lines 44 to 53, Gorsuch describes the subchannels as partitions of a subdivided bandwidth, where the subchannels are implemented by encoding with one of a number of different assignable codes. As can be seen in FIG. 3 of Gorsuch, a channel with 1.25 MHz bandwidth and a data rate of 500-600 kbps is subdivided into 64 subchannels, each having a data rate of 8 kbps. The data transfer may use a single subchannel (col. 8 lines 60-61) or the data transfer may be made on multiple subchannels (col. 9 lines 23-24). From these cited passages, it is clear that Gorsuch's subchannel is the bandwidth through which encoded data is transmitted and should not be confused with a block, defined in Applicants' specification and in the claims as a transmission unit of data.

Claims 1, 12, 18, and 21 state that the block size is service specific. By way of example, as shown in Applicants' FIG. 2, each block size of 400 bits, 600 bits, or 800 bits is specific to one of three different services S1, S2, and S3. Gorsuch, by contrast, does not disclose or suggest a service-specific block size as a smallest transmission unit for data even with the incorrect assumption that Gorsuch's subchannels are the same as Applicants' blocks. In Gorsuch column 6 lines 47 to 48 and FIG. 3, the subchannels have the same data rate of 8 kbps and are thus understood to have the same block size. Because these subchannels can be used either for data transmission or for voice transmission according to Gorsuch in column 3 line 31 and column 7

lines 32 to 33, and voice transmission and data transmission are two different services, Gorsuch does not show service-specific block sizes but only a constant block size used for all services.

Furthermore claims 1, 12, 18, and 21 specify that the server-specific block sizes is the smallest transmission unit for data. The subchannels of Gorsuch each have a maximum data rate of 8 kbps, meaning that each subchannel can transmit a maximum of 8 kilobits in a second. Furthermore, services that do not require such a data rate can still use a subchannel without reaching this maximum data rate, i.e., use only a partial capacity of that subchannel, e.g. only 4 kbps. If the subchannels of Gorsuch were regarded as blocks, the data rate of 8 kbps of the blocks would still be the maximum possible data rate, not the smallest transmission size as asserted by the Examiner in page 3 of the Office Action. As a side note, “kbps” refers to a data rate, not a data size. A data size could be specified in “bits” or “kilobits” but not in “kilobits per second”. The Examiner’s statement on page 3 of the Office Action, “the amount of data transmitted in each frame is set at a smallest transmission size of 8 kbps” does not make sense because “kbps” is a data rate, not a data size.

According to claims 1, 12, 18, and 21, blocks of data are entered in the frame in accordance with the predetermined coding. Applicants’ FIG. 4 illustrates a way in which blocks of data corresponding to services S1, S2, and S3 may be juxtaposed sequentially in a frame. Gorsuch neither describes nor suggests entering subchannels in a frame. As seen in FIG. 3, the subchannels in Gorsuch use the same frequency band but different orthogonal codes (see column 6 lines 48-53) so that the subchannels transmit data simultaneously instead of in sequential blocks. Such a transmission teaches away from entering the subchannels in a frame. Even if one

agrees with the opinion of the Examiner that subchannels can be regarded as blocks of data, such "blocks" of data are not entered in a frame.

For at least the foregoing reasons, claims 1, 12, 18, and 21 are believed to distinguish over Gorsuch. Whitehead is not understood to disclose or to suggest anything that would remedy the foregoing deficiencies of Gorsuch vis-à-vis the independent claims. Accordingly, claims 1, 12, 18, and 21 are believed to be allowable.

Each of the dependent claims is also believed to define patentable features of the invention. Each dependent claim partakes of the novelty of its corresponding independent claim and, as such, has not been discussed specifically herein.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claims, except as specifically stated in this paper, and the amendment of any claims does not necessarily signify concession of unpatentability of the claim prior to its amendment.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

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Respectfully submitted,

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